# Reductions in VOC Emissions from Flaring Operations: Technologies and Practices

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Session B2
Dennis Griffith, Session Chair

# Reductions in VOC Emissions from Flaring Operations: Technologies and Practices

Presentations

- **Flares: The Answer or the Problem?**

  Karen N. T. Olson, P.E., Texas Commission on Environmental Quality (Ms. Olson was unable to make her presentation because of travel restrictions; however, she has allowed it to be included in the proceedings.)

- **Flare System Emission Control**

  Scot Smith, Zeeco

# Reductions in VOC Emissions from Flaring Operations: Technologies and Practices

During the Texas Air Quality Study 2000, the flare in the following slide was observed during intensive ozone monitoring on August 30, 2000. Note that in addition to the smoking elevated flare, there is a lower flare to its left with a very intense flame that may be unstable.

Downwind of these two flares, concentrations of ozone in the range of 200 ppb were measured by the monitors used in the Texas Air Qualtiy Study 2000.

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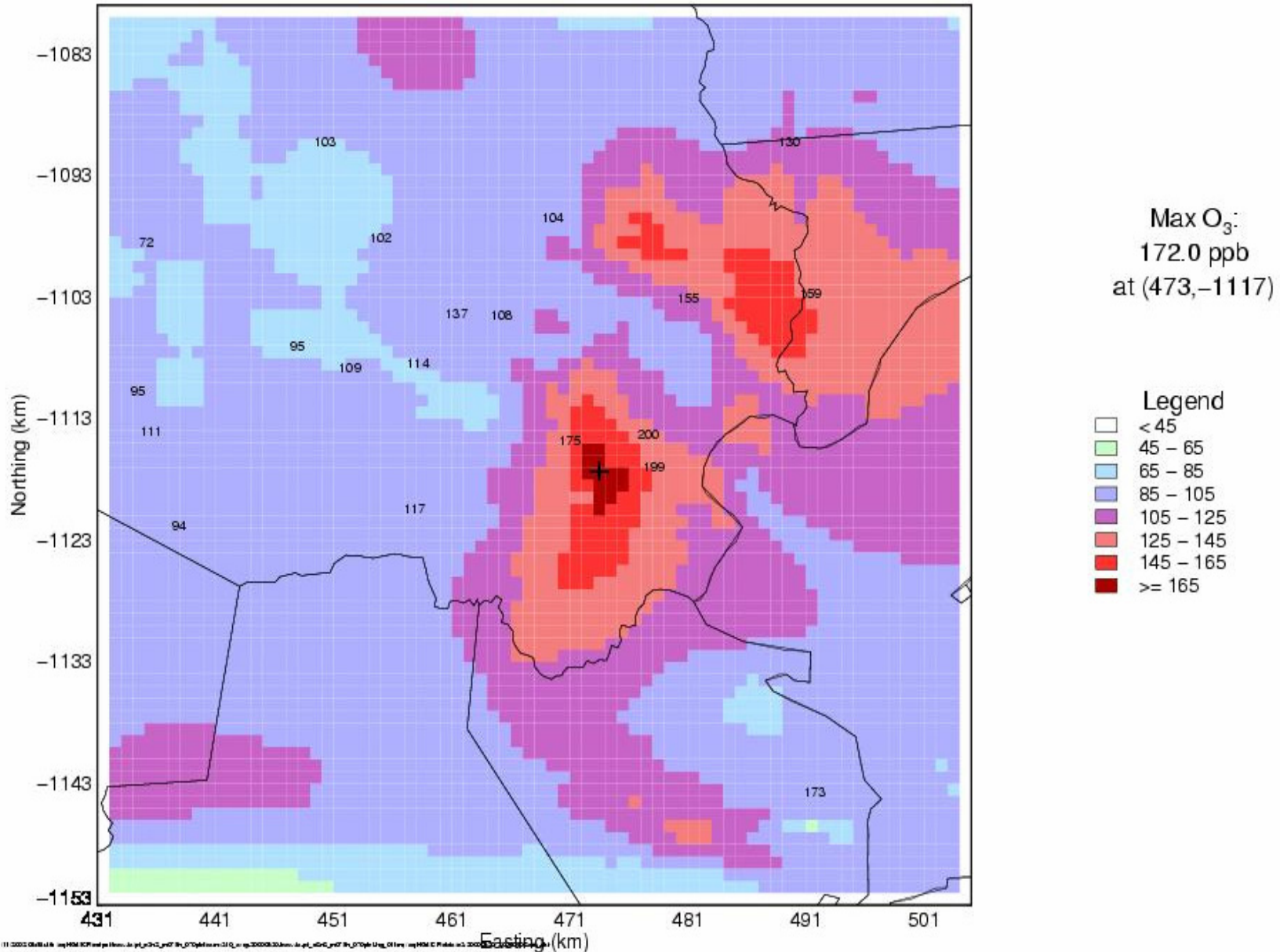
The next slide is the results of TCEQ's ozone modeling in the vicinity of the flares of the previous slide, which is about at the coordinates of Northing -1100 and Easting 480. The flares were modeled at 98% combustion efficiency. The actual measured ozone concentration was approximately 200 ppb while the modeled ozone concentration was in the vicinity of 150 ppb.

# Daily Maximum Hourly Average $O_3$ Concentrations (ppb) for 08/30/2000

HGMCR: base4a.pt_o2n2_m075n_070pbl



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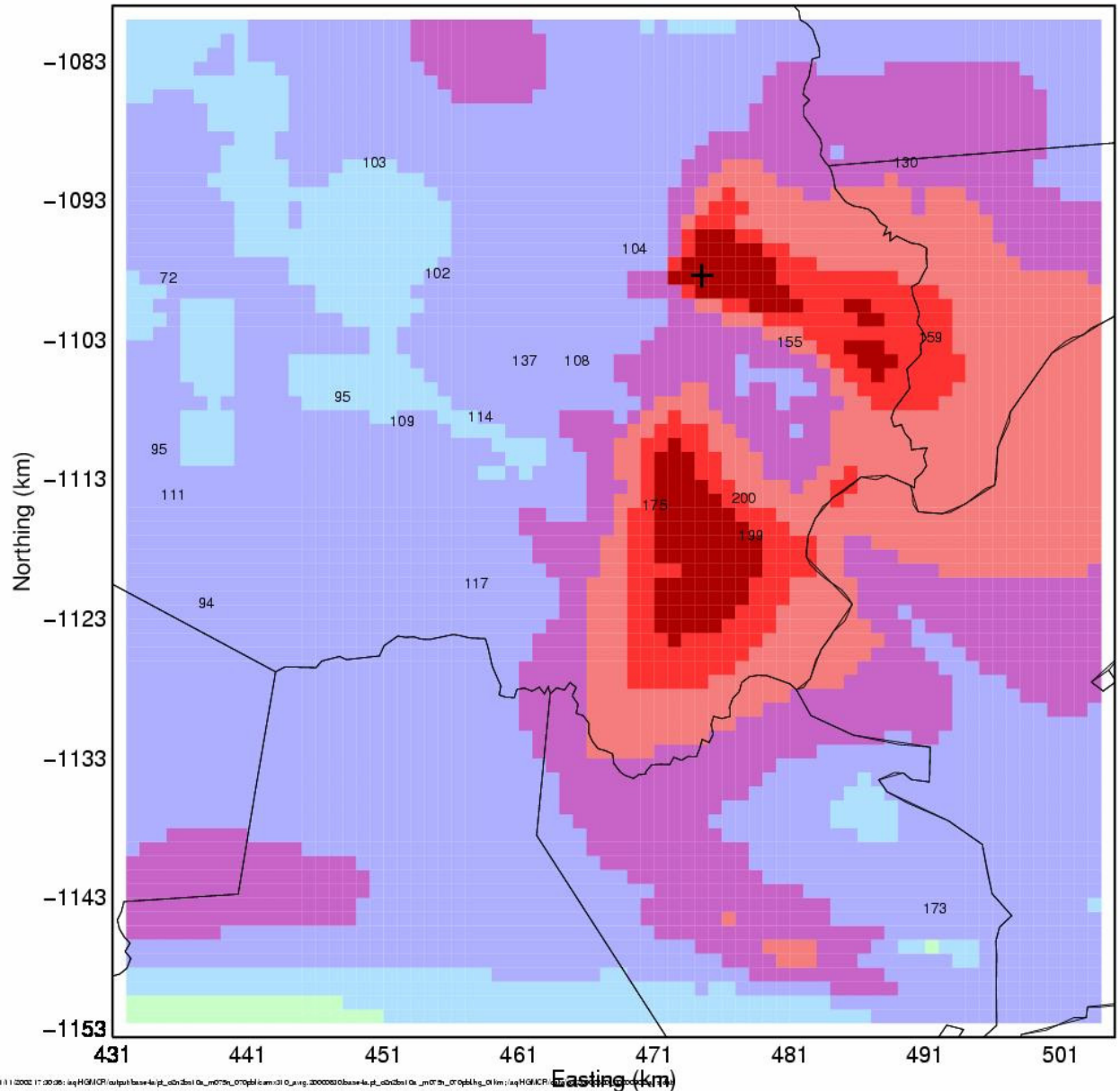
The next slide is the results of modeling in the vicinity of the flares at 90% combustion efficiency. The modeled results are in the range of 200 ppb to 210 ppb of ozone downwind of the flares, which agrees well with the actual measurements made by the Texas Air Quality Study 2000.

# Daily Maximum Hourly Average $O_3$ Concentrations (ppb) for 08/30/2000

HGMCR: base4a.pt_o2n2bs10a_m075n_070pbl




Max $O_3$:
210.1 ppb
at (474,–1098)

Legend

- < 45
- 45 – 65
- 65 – 85
- 85 – 105
- 105 – 125
- 125 – 145
- 145 – 165
- >= 165